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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/648,398

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EXAMINER

GELIN, JEAN ALLAND

ART UNIT

PAPER NUMBER

2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/648,398	SHIN, SANG RIM	
	Examiner	Art Unit	
	JEAN A. GELIN	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/576052.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 8, 9, 17-27, 31-36, and 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Mouly (US 5,878,033).

Regarding claim 1, Mouly teaches a method for performing cell broadcasting (i.e., broadcast service messages destined to users of mobile stations of the SMS-CB, col. 3, lines 14-26), comprising steps of: receiving in a mobile station at least one data unit of a short message service cell broadcasting (SMSCB) message broadcast from at least one cell of a communication system (i.e., units 5 and units 6 form the messages (frames) to be broadcast to MS, col. 8, lines 55-63, and receiving unit 12 to receive SMS-CB message from the base station, col. 9, lines 1-62); and reading the SMSCB message based on a schedule message comprised of a plurality of fields for informing the mobile station of a location of the SMSCB message, a length of a schedule period, and whether a new SMSCB message has been broadcast (i.e., MS reads the messages and displays them on the screen, col. 1, lines 25-31, col. 9, line 1 to col. 10, line 62).

Regarding claim 2, Mouly teaches the schedule message further comprises a field for informing the mobile station of a location of a next schedule message (col. 3, line 58 to col. 4, line 40 and col. 10, lines 1-53).

Regarding claim 3, Mouly teaches the schedule message further comprises fields for informing the mobile station of at least one of a start frame and an end frame of the schedule period (col. 4, line 60 to col. 5, line 40 and col. 10, lines 1-43).

Regarding claim 8, Mouly teaches the schedule message is written as a protocol data unit (i.e., schedule message includes information about the distribution of the service messages, col. 5, lines 20-26, which are interpreted in accordance with a preset protocol (col. 9, lines 1-22).

Regarding claim 9, Mouly teaches the at least one data unit of the SMSCB message is transmitted through a common traffic channel, the common traffic channel being multiplexed at a lower layer in the communication system with a common control channel, a dedicated traffic channel, and a dedicated control channel and wherein the common traffic channel and the common control channel are common logical channels and the dedicated traffic channel and the dedicated control channel are dedicated logical channels (col. 8, lines 38-63).

Regarding claim 17, Mouly further teaches the fields of the schedule message are at least a length indicator field, a schedule period start frame field, a schedule period end frame field, and a new SMSCB message indicator field (col. 8, lines 28-37 and col. 9, line 63 to col. 10, line 47).

Regarding claim 18, Mouly teaches the schedule message further comprises a header, the header indicating whether the data units are to be mapped to a common logical channel or a dedicated logical channel and whether the data units are to be

mapped to a common control channel or a common traffic channel (col. 8, lines 28-37 and col. 9, line 63 to col. 10, line 47).

Regarding claim 19, Mouly teaches the field indicator determines a number of octets X of the SMSCB message where X is any whole number (cols. 10-11)

Regarding claim 20, Mouly teaches wherein the schedule period start frame field and the schedule period end frame field define a schedule period for a renewed SMSCB message (col. 9, line 63 to col. 10, line 47).

Regarding claim 21, Mouly teaches the new SMSCB message indicator field indicates a start frame of the renewed SMSCB message (col. 10, lines 1-67).

Regarding claims 22, 31, and 40, Mouly teaches a method for performing cell broadcasting (col. 3, lines 13-42), comprising steps of: scheduling a short message service cell broadcasting (SMSCB) message (i.e., schedule message is broadcast during associated schedule period (col. 3, lines 13-25) and the reception unit monitors the reception of SMSCB message, col. 9, lines 1-22); multiplexing (multiplexer 8), at a lower layer in a first communication system, a common traffic channel with a common control channel, a dedicated traffic channel, and a dedicated control channel, wherein the common traffic channel and the common control channel are common logical channels and the dedicated traffic channel and the dedicated control channel are dedicated logical channels (i.e., the mobile station monitors a control channel BCCH broadcast by the base station (col. 9, lines 1-22), the BCCH corresponds to point-to-multipoint or CTCH, and paging channel for BS to alert MS (col. 9, lines 1-22), the paging channel performs the function of CCCH, and read on col. 8, lines 17-65 of

Mouly is a point-to-point connection and SDCCH type of signaling channel corresponding to DTCH and DCCH); and transmitting a schedule message through the common traffic channel of the first communication system (i.e., broadcast schedule message, col. 8, lines 27-37). The reverse function is performed at the mobile station to received broadcasted SMSCB messages from the base station.

Regarding claims 23, 32, Mouly teaches comprising a step of segmenting the SMSCB message into a plurality of data units to be scheduled (col. 8, lines 27-63).

Regarding claims 24, 33, Mouly teaches the schedule message is received at a second communication system for reading the SMSCB message and wherein the first communication system is one of a mobile station and a network and the second communication system is the other (cols. 8-9).

Regarding claims 25, 34, Mouly teaches the schedule message is comprised of a plurality of fields for informing the mobile station of a location of the SMSCB message, a length of a schedule period, and whether the network has broadcast a new SMSCB message (col. 4, line 60 to col. 5, line 57).

Regarding claims 26, 35, Mouly teaches the schedule message further comprises a field for informing the mobile station of a location of a next schedule message (col. 4, line 60 to col. 5, line 57).

Regarding claims 27, 36, Mouly teaches the schedule message further comprises fields for informing the mobile station of at least one of a start frame and an end frame of the schedule period (col. 4, line 60 to col. 5, line 57).

Regarding claim 41, Mouly teaches the schedule message further comprises a field for informing the mobile station of a location of a next schedule message (col. 3, line 58 to col. 4, line 40 and col. 10, lines 1-53).

Regarding claim 42, Mouly teaches the schedule message further comprises fields for informing the mobile station of at least one of a start frame and an end frame of the schedule period (col. 4, line 60 to col. 5, line 40 and col. 28, lines 42-60).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mouly in view of Persson et al. (US 6,144,653).

Regarding claims 4, 6, Mouly teaches all the limitation above except mapping the data units to one of a common logical channel of a lower layer in the communication system and a dedicated logical channel of the lower layer in the communication system.

However, the preceding limitation is known in the art of communications. Persson teaches that user data bits are mapped into the field data for transmission (col. 17, lines 57-62); the SMSCH logical channel is used to deliver short messages to a specific mobile station receiving SMS services (col. 16, lines 65-67); corresponding SMS messages are mapped into the data field for transmission over physical layer (lower

layer) and a DCC locator (DC) is a 7-bit parameter which provides information to assist a mobile station in finding a DCC (col. 45, lines 14-40). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the technique of Persson within the system of Mouly in order that the DCC locator (DL) values 1, 2, 3,...127 are mapped to channel numbers 1-8, 9-16, ...109-1016 respectively, and the available frequencies may be grouped into blocks to aid the MS in searching for DCC and decrease the time required for service acquisition by the mobile station.

Regarding claims 5, 7, Mouly with Petersson teach all the limitations of claim 4 above. Petersson further teaches the schedule message further comprises a header determining the channel to which the data units are to be mapped (col. 22, lines 20-67).

5. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mouly in view of Ludwig et al. (US 6,697,352).

Regarding claim 10, Mouly teaches all the limitation above except the schedule message is transmitted from a higher layer in the communication system and received at a lower layer in the communication system.

However, the preceding limitation is known in the art of communications. Ludwig teaches the peers of the higher use the packets of said layer as a vehicle for conveying said quality requests to the lower layer (col. 8, lines 32-65). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the technique of Ludwig within the system of Mouly in order to provide a type of control channel that conveys quality requests from the higher layer to the lower layer.

Regarding claim 11, Mouly in view of Ludwig teaches all the limitations above. Ludwig further teaches the lower layer performs scheduling of the SMSCB message and attaches to the schedule message a header indicative of schedule message length (i.e., controlling the process of flow packets according to scheduler, col. 17, line 44 to col. 18, line 20).

Regarding claim 12, Mouly in view of Ludwig teaches all the limitations above. Ludwig further teaches the higher layer is a radio link control layer (col. 3, lines 26-47 and col. 6, lines 15-26).

6. Claims 28-30, 37-39, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mouly in view of Persson et al. (US 6,144,653).

Regarding claim 28-30, 37-39, and 43, Mouly teaches process of broadcasting messages in a wireless communication system wherein the lower layer is a media access control (MAC) layer.

However, the preceding limitation is known in the art of communications. Persson teaches the use of digital control channel (DCC) to broadcast short message used for the SMS broadcast service. The DCC is divided in into three layers Layer 1, layer 2, and Layer 3; the layer 2 is the one that inherently includes the MAC layer which defines the techniques necessary for the accurate transmission of information within the constraints of the physical channel, e.g., error correction and detection (col. 17, lines 9-21) and col. 26, lines 20-38). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the technique of Persson within the system of

Mouly in order that the Layer 2 protocol frames identified are always logically transmitted beginning with the left most bit of a frame and ending with the rightmost bit of a frame.

7. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mouly in view of Ludwig et al. (US 6,697,352) further in view of Persson et al.

Regarding claim 13, Mouly in view of Ludwig teaches all the limitations above except the layer is a media access control (MAC) layer.

However, the preceding limitation is known in the art of communications. Persson teaches the layer 2 protocols comprise of Media Access Control (MAC) functionality; the layer 2 frames are always logically transmitted beginning with the left most bit of a frame and ending with the rightmost bit of a frame (col. 26, lines 24-38). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the technique of Persson within the system of Mouly in order for the mobile station to use the paging frame (PF) defined by class by MAC_SUPPORTED_PFC when the default paging frame is higher than the highest class MAX_SUPPORTED_PFC.

Regarding claim 14, Mouly in view of Ludwig further in view of Persson teaches all the limitations above. Ludwig further teaches the schedule message further comprises a MAC header (col. 1, lines 45-61 and col. 17, line 44 to col. 18, line 20).

Regarding claim 15 Mouly in view of Ludwig further in view of Persson teaches all the limitations above. Persson further teaches the MAC header comprises: a first field indicating whether the at least one data unit is to be mapped to one of a common

logical channel of the MAC layer or a dedicated logical channel of the MAC layer (col. 26, lines 24-38 and col. 45); and a second field indicating whether the at least one data unit is to be mapped to one of a common control channel of the MAC layer or a common traffic channel of the MAC layer (col. 26, lines 20-38 and col. 45).

Regarding claim 16, Mouly in view of Ludwig further in view of Persson teaches all the limitations above. Persson further teaches if the second field indicates that the data units are to be mapped to the common traffic channel, the second field also indicates whether the data units comprise the SMSCB message or the schedule message (col. 41, line 5 to col. 42, line 60 and col. 43, lines 5-67).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN A. GELIN whose telephone number is (571)272-7842. The examiner can normally be reached on 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JGelin
April 4, 2008
/Jean A Gelin/
Primary Examiner, Art Unit 2617